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IN THE

# Supreme Court of the United States

OCTOBER TERM, 1990

SAFE FLIGHT INSTRUMENT CORPORATION,
*Petitioner,*

*v.*

SUNDSTRAND DATA CONTROL, INC.,
*Respondent.*

PETITION FOR WRIT OF CERTIORARI TO THE
UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

## PETITIONER'S REPLY TO THE BRIEF IN OPPOSITION

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## REPLY TO BRIEF IN OPPOSITION

### 1. Introduction

Petitioner is aware that certiorari is very rarely granted in a patent case — that this Court's enormous workload, combined with the arcane and specialized nature of most patent cases, often justifies leaving the area to the Federal Circuit to sort out. No doubt for this reason more than one memo prepared in this Court has begun (and perhaps ended) its analysis with the observation: "This is a patent case. I would deny."

But certiorari is nonetheless appropriate in this case. For although a patent case, it is neither overly arcane nor routine. The approach taken by the courts below is so extreme a departure from this Court's teachings and from the fundamental principles of traditional patent law, and its implications will be so broad and so serious, that review should be granted. If this were otherwise doubtful, that doubt would be dispelled by the respondent's brief in opposition. For far from demonstrating that this case is *not* certworthy, that brief only makes clearer the gravity of the Federal Circuit's error.

### 2. The Court of Appeals' Decision Flatly Conflicts With *Graver Tank*

Respondent attempts to diminish the significance of this case. But the stakes are very high. For notwithstanding the representations of the respondent, the Court of Appeals for the Federal Circuit has dangerously narrowed the protection traditionally given invention and innovation through the doctrine of equivalents.

First, the respondent mischaracterizes this Court's decision in *Graver Tank* in an attempt to paper over the unquestionable fact that the Federal Circuit's decision indeed conflicts with

this Court's *Graver Tank* ruling. In *Graver Tank*, this Court held that under the doctrine of equivalents, "a patentee . . . may proceed against the producer of a device 'if *it* performs substantially the same function in substantially the same way to obtain the same result.'" *Graver Tank & Manufacturing Co.* v. *Linde Air Products Co.*, 339 U.S. 605, 608 (1950) (quoting *Sanitary Refrigerator Co.* v. *Winters*, 280 U.S. 30, 42 (1929)) (emphasis added). The Federal Circuit here, however, concluded that "a court cannot merely view an invention as a whole, rather it must perform an element-by-element analysis of the patent in suit and must find each element in the claimed invention, or its equivalent, is found in the alleged infringing product." (A24).

The contrast with the test mandated by *Graver Tank* could not be clearer. *Graver Tank*'s test for infringement under the doctrine of equivalents does *not* require that the accused device or product have an element equivalent to each element in the patented invention. The test asks only whether an invention that does the same thing as the patented device "performs substantially the same function in substantially the same way." *Graver Tank*, 339 U.S. at 608. Under the test adopted by the Federal Circuit, *Graver Tank* would have come out the other way. More to the point, if this Court's pronouncement in *Graver Tank* is to remain vital, the test employed by the Federal Circuit cannot be allowed to stand.[1]

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[1] Though respondent describes *Graver Tank*, it misses the import of that ruling. In that case, concerning two welding flux compounds, one element for whose use the patent called was magnesium, an alkaline earth metal. An equivalent *element* presumably would have been any of the other alkaline earth metals. The question presented in *Graver Tank*, however, was whether the replacement in the accused compound of magnesium with manganese — which is not an alkaline earth metal at all — was sufficient to avoid a finding of infringement. Despite the fact that there was no equivalent for the manganese element of the patented welding flux, this Court held that the doctrine of equivalents protected the patentee, because the accused invention was functionally equivalent to the patented invention as a whole. *See Graver Tank*, 339 U.S. at 608.

Our insistence that the doctrine of equivalents, as articulated by this Court, requires an examination of the invention as a whole has nothing whatsoever to do with adherence to or departure from the language of the patent claim, despite what the respondent seems to think. *See* Br. Opp. 14-16. The doctrine of equivalents, of course, does not even apply to claims of *literal* infringement. Its very purpose is to protect the patentee from "an imitation of a patented invention which does not copy every literal detail," *Graver Tank*, 339 U.S. at 607. Safe Flight does not, therefore, as respondent would have it, seek "a property right without bounds and without definition," Br. Opp. 16, or ask for unlimited protection against "any" device. *See* Br. Opp. 14. It seeks only the equitable protection to which all patentees are entitled under this Court's decisions.

The respondent's position, however, is telling. Forty years after *Graver Tank*, it would seem unimaginable that anyone could suggest a regime in which a patentee would be protected only from literal infringement. Yet respondent's argument amounts to just such a suggestion. Its argument is that element-by-element equivalence is necessary to keep patentees within the bounds of the claim language that "define[s] the extent of the claimed property right," Br. Opp. 3 n.3. Little could better demonstrate how radical a departure from the teachings of this Court element-by-element equivalence represents. As petitioner said at the outset, "[t]he literalism in examining claims for patent infringement that this Court long ago banished by the front door has now been snuck in through the back door." Pet. 17.

Rejection of the Federal Circuit's element-by-element approach is essential if the doctrine of equivalents is to continue to serve its valuable function. Although years have passed since *Graver Tank* — and although over a century and a half has passed since this Court first announced the doctrine of

equivalents — the fundamental role of that doctrine in our economic system is undiminished. As this Court has explained, the doctrine of equivalents is necessary to provide protection from "the unscrupulous copyist [who would] make unimportant and insubstantial changes and substitutions in the patent which, though adding nothing, would be enough to take the copied matter outside the claim, and hence outside the reach of law." *Graver Tank*, 339 U.S. at 607. It is exactly the power to infringe in this way that will be established if this Court declines to hear this case. It is exactly this power that respondent seeks.

What is at stake should thus be clear. For wish as it might that the decision of the district court will have "no impact on 'devices such as computers, compact disc players, and those used in satellite technology, cable television, and a vast array of other industries,'" Br. Opp. 12 (quoting Pet. i), respondent cannot sustain this position. As respondent elsewhere insists, it would be untenable for "electronic patents [to] be subject to a different analysis under the doctrine of equivalents." Br. Opp. 10 n.7. By weakening the protection given patented devices under the doctrine of equivalents, the Court of Appeals' decision thus has implications for *all* inventions.

For an additional and independent reason, the decision of the Court of Appeals will be particularly destructive to those industries that employ devices that process electronic signals. As Safe Flight argued in its petition for certiorari, with regard to devices that incorporate electronic signal processing the acute damage that the element-by-element test for equivalence will do is compounded by the Court of Appeals' conclusion that under the federal patent law an "isolated signal" can properly be held an "element" of a patent.[2] Even under the Federal

[2] Respondents are, of course, mistaken in their statement that Safe Flight "suggests that electronics patents should be subject to a different analysis under the doctrine of equivalents." Br. Opp. 10 n.7. The doctrine of equivalents

Circuit's element-by-element approach, this holding alone is too destructive of patent protection for this Court to tolerate. Certiorari should be granted and the courts below given an opportunity on remand to interpret the words in the Safe Flight horizontal windshear patent claim — "means for generating a signal representing the rate of change of the instantaneous air speed" of the aircraft — in light of a holding by this Court that under settled principles an isolated signal cannot simply be treated as an element of an electronic signal processing patent. *See* Pet. 17-22.

If the patent law cannot properly protect inventors in these industries, the system of incentives to innovate will vanish. The damage that this will ultimately do to our economy, long known as the most fertile ground in the world for new invention, may be immeasurable. While these implications of element-by-element equivalence may not have been clear on the facts of *Pennwalt Corp.* v. *Durand-Wayland, Inc.*, 833 F.2d 931 (Fed. Cir. 1987) (en banc), *cert. denied*, 108 S.Ct. 1226 (1988), *see* Pet. 15, they could not be clearer than they are here. Respondent calls *Pennwalt* "virtually indistinguishable from the present case," Br. Opp. 12. Whatever respondent's word "virtually" is meant to subtract, *cf.*, *Maryland* v. *Craig*, 110 S.Ct. 3157, 3176 (1990) (Scalia, J., dissenting), the fact is that this case *is* distinguishable from *Pennwalt*. *See* Pet. 15. And, unlike respondent, petitioner does not purport to *know* this Court's "reasons for denying the writ in *Pennwalt*." Br. Opp. 13.

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must be uniformly applied to all inventions. It is simply the Federal Circuit's conclusion — the conclusion that an isolated signal is an element of the Safe Flight horizontal windshear patent — that makes the damage that will be done if the Court lets stand the Federal Circuit's application of element-by-element equivalence all the more stark with regard to signal processing devices.

### 3. The Court of Appeals Has Unacceptably Limited the Protection of the Second Patent on the Basis of the Scope and History of the First.

Respondent suggests that, even if Safe Flight is right about the Court of Appeals' misapplication of the doctrine of equivalents, certiorari is inappropriate because the protection Safe Flight seeks was given up in order to obtain its patents in the first place. Despite its statement that "the arguments made to the Patent Office by Safe Flight during the prosecution of its *second patent* were held to be *independent* grounds" for finding that the Sundstrand microburst windshear warning device did not infringe Safe Flight's second patent, Br. Opp. 17, the respondent, like the Court of Appeals, *does* in fact use the scope and history of the first patent to limit the scope of protection afforded the second.

As we explained in the petition, whatever the relationship between the earlier, subcomponent patent and the prior art, the language used and arguments made to distinguish it above that art simply cannot be relevant to the scope of the advance made by the second, overall patent, even when the language and arguments describing the already-patented subcomponent are repeated in the application for the second patent. Pet. 25-26.

The legal error made by the Court of Appeals in this regard is evident in the very approach the respondent takes in its brief in opposition. Respondent's statement of the case contains a detailed argument about the *horizontal windshear circuit* that was included within the challenged device. Did it infringe the first Safe Flight patent? Was it rather, as Sundstrand now argues, based upon Boeing's prior art? What was the significance of the isolated airspeed rate signal? We are treated to several pages of description, to a new and dauntingly complex diagram, and even to the novel explanation that the use of the horizontal windshear circuit without the horizontal acceleration

masking signal — i.e., the Safe Flight circuit — was considered by Sundstrand, but rejected because of its "inferior performance." Br. Opp. 9.[3]

The problem with all this is that, while it may have relevance to whether the Sundstrand device infringes the first, less substantial Safe Flight horizontal windshear patent, it can have no relevance at all either to whether the Sundstrand device infringes the groundbreaking Safe Flight microburst warning patent or to the scope of that second patent. The Sundstrand device is not a horizontal windshear warning device. Indeed, it seems to be common ground that such a device would be of no commercial value. Rather, Sundstrand has built an airborne microburst windshear warning device, of which the horizontal windshear circuit is but a subcomponent. The microburst windshear warning system is a device of great commercial usefulness that is now required by the FAA on all major commercial aircraft — something respondent does not deny.

Safe Flight's microburst warning patent is for the first device for measuring the vital phenomenon of downdraft and for using that measurement, by adding it to a horizontal windshear measurement, to warn of the effects of the hazardous phenomenon of microburst windshear. That is its novel feature. It is obviously artificial to constrict the scope of this second patent by the words chosen to describe a subcomponent that does not make up any part of the subject matter of the "invention" that is being patented.

Revealing another rigid formalism in the Federal Circuit's approach, the respondent suggests that to focus on the "innova-

[3] In fact, pretrial testimony indicated that Sundstrand didn't "reject" or "choose" anything. The system implemented in the Sundstrand device and stamped with the Safe Flight patent numbers was designed, from Safe Flight disclosures, by Boeing and implemented without change by Sundstrand. Furthermore, as a moment of reflection will make obvious, the performance of the horizontal windshear circuit with or without the masking signal used by Sundstrand will necessarily be identical.

tive concept" contained in a new invention is somehow illegitimate. Br. Opp. 12, 14. But this has long been the approach implicit in this Court's patent cases. *See, e.g., Westinghouse* v. *Boyden Power Brake Co.*, 170 U.S. 537, 561 (1898) (an element that was *expressly described in the claim* can be "immaterial" to the question of infringement because it is inconsequential to the invention). *See also* 6 *Walker on Patents* § 21.40, 393 (Lipscomb ed. 1987) ("construction of a patent is to be made in the context of the patent subject matter as a whole, *particularly with respect to the inventive concept*.") (emphasis added).

In its original opinion, the district court wrote that "[t]he [second] patent was similarly worded [as the first patent] to avoid the same problems. . . . Thus our analysis of the effect of the term 'representing' in the [first] patent applies to the [second] patent, as well." (A28-29 n.6) And in its opinion on reconsideration, the district court concluded that Safe Flight presented "arguments" to the Patent and Trademark Office in support of the second patent "identical to the arguments made . . . to distinguish the [horizontal windshear patent] over the prior art." The inclusion of these terms and arguments in the second patent application, the court found, served to "limit the scope of the . . . patent [for the microburst warning device]." (A7).

But the inclusion of this language, or of arguments relevant to the advance made in the first patent above the prior horizontal windshear art, in the *second* Safe Flight patent can do no more than describe a particular version of one subcomponent part of the microburst warning device. The subcomponent part is already patented. The language and arguments relating to it can be of no relevance to the advance being made by the second patent, nor to the extent to which the second patentee may be precluded from claiming infringement on the basis of prosecution history estoppel. Put another way, even if the horizontal windshear circuit contained within the Sundstrand

device does not infringe the first patent, the Sundstrand device itself infringes the second, microburst warning patent.[4]

Respondent never comes to grips with, much less denies, the central point: the description of a subcomponent part, even the arguments that distinguished it from the prior art, cannot be a limitation on the scope of a new patent. That there may be a slightly different way to create that subcomponent part should not be allowed to limit the protection to which the inventor is entitled under the patent law. "An applicant for patent is required to disclose the best mode then known to him for practicing his invention. 35 U.S.C. § 112. He is not required to predict all future developments which enable the practice of his invention in substantially the same way." *Hughes Aircraft* v. *United States*, 717 F.2d 1351, 1362 (Fed. Cir. 1983).

As we observed in our petition for certiorari without rebuttal by respondent, the language about the horizontal windshear circuit in the second patent is like a description of a particular bell used in a telephone. If language describing a subcomponent part of an invention is permitted to limit the scope of protection afforded the overall device simply because that language is included in the second patent, the scope of the second patent will be limited *not* by the scope of the invention or its own prosecution history, but by the scope of the first. Yet just as an inventor cannot gain the benefit of an additional 17-year period of protection by incorporating language from an important earlier invention in a modest new patent, he should not be hobbled by the incorporation of a modest earlier invention in an important new patent.

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[4] Whatever the precise detail of Sundstrand's circuit for measuring horizontal windshear, it is undisputed that the tiny change in this subcomponent part is the *only* difference in the entire machine. Otherwise, its microburst warning device is precisely the same as that described by Safe Flight's second patent. The importance of the second patent is that it is the first ever issued for measuring the vital downdraft phenomenon and for using that measurement in an airborne device to warn of potentially deadly microburst.

In simply ignoring this elementary principle, the Court of Appeals has utterly abandoned the rule that the scope of equivalents to be permitted an invention depends on the novelty of that invention. Indeed, even the respondent concedes that use of the prosecution history of the first patent to narrow the second patent "might very well be improper." Br. Opp. 17. By focussing on restrictions contained in an earlier patent, rather than on the inventive concept actually described by the second patent, the Court of Appeals has dangerously narrowed the protection of all devices that incorporate earlier inventions. Respondent does not deny that this is a vast and vital category. Under the rule approved below, the door is opened to the very evils against which the doctrine of equivalents was intended to protect inventors — simply by the coincidence, bound to occur with mounting frequency, that one invention incorporates another. One slight alteration in a *component* invention, and the novel idea of the *second* inventor will be out of his control. It is essential that certiorari be granted and that the protection under federal patent law of this crucial class of inventions be reinstated.

Respectfully submitted,

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